

WHAT IS CLAIMED IS:

1. A method of producing p-type Group III nitride compound semiconductor, comprising steps of:

forming a first Group III nitride compound semiconductor
5 layer doped with p-type impurities;

forming a second Group III nitride compound semiconductor
layer doped with substantially at least one of (i) no impurities,
(ii) n-type impurities and (iii) n-type and p-type impurities;
and

10 reducing resistance after or during the step of forming
said second Group III nitride compound semiconductor layer.

2. A method of producing p-type Group III nitride
compound semiconductor according to claim 1, further comprising
15 a step of removing said second Group III nitride compound
semiconductor layer after or during the step of reducing
resistance.

3. A method of producing p-type Group III nitride
20 compound semiconductor according to claim 1, wherein said second
Group III nitride compound semiconductor layer has a thickness
selected to be in a range of from 1 nm to 100 nm, both inclusively.

4. A method of producing p-type Group III nitride
25 compound semiconductor according to claim 1, wherein an amount

of p-type impurities added to said second Group III nitride compound semiconductor layer is smaller than an amount of p-type impurities added to said first Group III nitride compound semiconductor layer.

5